STILLWATER WILDLIFE MANAGEMENT AREA
Fallon, Nevada

ANNUAL WATER MANAGEMENT PROGRAM

January 1, 1972 to December 31, 1972

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## Purpose

The Water Management Program for the Calendar Year January 1 through December 31, 1972, summarizes the water receipts, distribution and marsh conditions attributed to water supply during the previous year. From the cooperative snow survey data of the eastern slopes of the Sierra Nevada Mountains, the current water supply outlook is presented, along with a plan of unit management for optimum use of the anticipated water supply.

## Summary - Water Conditions January 1, 1971 to December 31, 1971

Snowpack conditions early in the year were excellent over most of Nevada. Reservoir storage was also higher than normal. For the summer months, the Carson River flow was 130% of normal. By October 1, Lahontan Reservoir storage was still 109% of average.

Large streamflows were also experienced on the Humboldt River drainage. By early summer Rye Patch Reservoir and the Humboldt Sink near Lovelock were full. For the first time in many years water entered the Carson Sink from the Humboldt Sink. At the end of the year much of the Crason Sink was full with water coming south against the Pelican Island perimeter dike.

Stillwater Wildlife Management Area received about 25% of the water released from Lahontan Reservoir. After all water not accountable to Stillwater Wildlife Management Area was removed, annual net receipts amounted to 92,020 acre feet.

No large spills were released from Lahontan Reservoir early in the year. Most of the water that came down the Carson River to Sagouspe Dam was diverted to Indian Lakes.

Early in the year all units were filled. In April, water had to be dumped into the brush at Indian Lakes because of insufficient storage facilities, but by June, Willow-Millen Lakes were a foot below operating level. At the same time, inflows raised Stillwater Point Reservoir close to its maximum level. The problem is that water from Stillwater Point Reservoir cannot be transported to the west side of the marsh.

Generally, water conditions were good throughout the year. Deficiencies occurred during summer months so receipts were stopped to Willow-Millen and Swan Lakes. East Alkali Flat #2 was dry most of the year. During September, certain units were filled for the hunting season. Swan and Willow-Millen

Lakes were filled November through December as water became available. Upper Foxtail Lake was drained in November as a management practice with hopes of increasing plant production there.

Pelican Island received little water during the year until September when large flows flooded much of that area. By December, most of it was dry again.

Marsh conditions deteriorated considerably below last year's level. Salinity was not a problem, with adequate water receipts. Aquatic plant production dropped below last year's level. A steady decline of submergents in Foxtail Lake has been noted for the past three years. Dry, Goose and Tule Lakes produced less submergents than last year.

Emergent vegetation grew well this year. Most stands were robust and produced excellent seed crops. Alkali bulrush (Scirpus robustus) was best in the Nutgrass Unit, Pintail Bay and East Alkali Flat #1. Hardstem bulrush (Scirpus acutus) was most dense in Lead Lake near South Lead Lake Landing and across the road in adjacent Millen Lake. Expansion of emergents was most notable in Willow-Millen Lakes where new strips of hardstem and alkali bulrushes appeared along shorelines.

## Water Outlook

The May Water Supply Outlook, published by the Soil Conservation Service, forecasts Carson River at Fort Churchill to flow 70% of normal from May to July. Lahontan Reservoir storage on May 1 was 277,000 acre feet compared to the average of 222,000 acre feet.

Water shortages are anticipated in Stillwater Marsh. Reservoir storage is down two feet. The region received little precipitation this spring so farmers are irrigating early. This greatly reduced the usual inflows to Stillwater Point Reservoir. It appears that some units will have to be taken out of production by late summer.

## General Objectives

At the beginning of the year all units except Upper Foxtail were full. Later in the spring as water receipts stabilizes, unit levels should be held stationary through the waterfowl nesting season. By late June deficiencies will occur so inflows will be stopped to units with low habitat values.

In September, units should be raised to hunting season operating levels, the number of which will depend upon the amount of water available. The remaining units can be filled, generally, from November through December.

A rotational system should be developed for drying up the units during winter months to improve aquatic plant production. High carp populations could be controlled temporarily by drying a unit or lowering it sufficiently to make chemical control economically feasible. Drying a unit would also

have the beneficial effect of aerating and aiding decomposition of organic matter.

Pastures will be irrigated principally in the spring when storage facilities cannot hold the water receipts.

Unit Management

Stillwater Point Reservoir. The reservoir will be operated as a water storage facility, and as a wildlife habitat unit secondarily. During winter months the reservoir level will be held several feet below capacity to accommodate possible "spills" down Diagonal Drain. Water will be used to maintain levels of other units. If possible, some water will be held in the reservoir to permit filling of selected units prior to the waterfowl hunting season.

Upper Foxtail Lake. This unit is presently dry and will be kept out of production this year unless large water receipts occur and it becomes necessary to fill it.

Foxtail and Dry Lakes. These lakes are connected and will be operated near 3889 feet elevation during spring, summer and fall months. In November or December, it would be desirable to close off Foxtail Lake and drain it as low as possible until early March of 1973. If it cannot be completely drained, it may be possible to draw down the water level and chemically kill the carp.

Cattail Lake. This lake will fluctuate, depending upon the amount of water being transported throug it. Its operating level should be around 3885 feet. If water shortages occur this fall, the lake can be forfeited.

Division Pond. Operation will primarily be for water storage and transportation to Goose Lake and Nutgrass Unit. Levels will vary greatly.

East Alkali Flat #1. This impoundment should be operated near 3893 feet through the year until November. Then it may be drained for management purposes. It provides nesting habitat as well as a major feeding area in the refuge during the fall period.

East Alkali Flat #2. Water may be stored temporarily for later use in other units. At other times, it will remain dry.

Goose Lake. Operating level should be 3877.0 feet from April through September for waterfowl production and aquatic plant growth. In September it may be raised several inches to facilitate boat use by hunters. If possible, the unit should be lowered to 3876 feet next January and February to expose portions of the bottom.

Tule Lake. This lake should be held stationary between 3876.5 and 3877.0 feet from April through June for the nesting season. It should be raised to 3877.0 during the hunting season, if water is available. It may be lowered again in January and February.

Swan Lake. The lake will be filled in January when water receipts exceed storage capacity. As better units can take water, Swan Lake will be closed off in February. It may be November or December before any water becomes available for this lake again.

Willow-Millen (West Marsh). These lakes were full in January. Inflow was stopped in March, with water being used in other units. Like Swan Lake, water will probably not be available for these lakes again until November or December. However, these lakes will have priority over Swan Lake in receiving water this fall.

Lead Lake. This lake is a necessary part of the water transportation system between Canvasback Gun Club and Indian Lakes to the primary marsh. It should be held no higher than 3877.80 feet in spring to allow Canvasback Club to deliver water to the lake. From April through August it should be held at 3877.80 feet to allow water flow to Tule Lake. After that date, the level can fluctuate with Tule Lake.

Pintail Bay. It would be desirable to drain this unit during January and February, but it usually has to be filled because of insufficient storage facilities. Pintail Bay's level should be held stationary from April through early July for waterfowl nesting. Small amounts of water should be released to the Sand Dunes all summer to prevent excessive water salinity.

During August and September the unit can be allowed to drop to expose some shoreline for pintail resting areas. The unit should be filled by the start of the waterfowl hunting season and held steady until December.

Nutgrass Unit. In January and February Nutgrass Unit can be lowered. Releases must be regulated so that Big Water's level does not equalize with Nutgrass. In April the unit should be raised to 3875.5-3876.0 feet and stabilized through June for waterfowl nesting and held as close to that level as possible through summer for aquatic plant production. About 5-10 cfs should be released to Big Water through spring and summer to hold salinity down in the Nutgrass Unit. The unit should be raised to 3876.00 feet for the waterfowl season and held there through December.

Pelican Island. Little management can be accomplished in this unit. The perimeter dike was washed out in several places by large releases from Lahontan Reservoir. Repair does not appear possible in the near future with the Carson Sink containing enough water to prevent use of heavy equipment.

Small flows down the Carson River will be contained in the diked unit, but probably no more than half the unit could hold water before it runs through the breaks in the dike.

Conclusions

A fair water year is expected. Lahontan Reservoir storage is above normal, but streamflows are forecast only 70% of normal. Principal habitat units are now at desired levels, but Stillwater Point Reservoir is 2-feet below full.

Substantial water deficiencies are anticipated by late July and some units may be taken out of production. Water will be saved in the reservoir to raise principal units during the hunting season. Winter receipts will be stored in the reservoir and Indian Lakes.

Submitted by,

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